United States
Environmental Protection
Agency

EPA530-R-07-001
April 2007

National Priority Chemicals Trends Report (2000-2004)

Section 4
Chemical Specific Trends Analyses for Priority Chemicals (2000−2004): Heptachlor

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Heptachlor

Chemical Information:

Heptachlor is an organochlorine insecticide produced by the chlorination of chlordane. It is a white powder that smells like mothballs. Heptachlor was first registered in the United States in 1952 for use as a general insecticide on a wide range of agricultural crops. Heptachlor was also used for home and garden insect control, for termite control, and as a seed treatment. In 1974, EPA issued a Notice of Intent to Cancel all registered uses of heptachlor except those for subterranean termite control and dipping of non−food plants. In March 1978, most other uses of heptachlor were canceled.

CAS Number – 76−44−8

Alternate Names –1,4,5,6,7,8−Heptachloro−3a, 4,7,7a−tetrahydro−4,7−ethanoindene, Heptachlorane

General Use − Heptachlor is now severely restricted and is presently only used in the United States to control fire ants in buried, pad−mounted electric power transformers and in underground cable television and telephone cable boxes.

Potential Hazards – Heptachlor is highly toxic and may be fatal if inhaled, swallowed, or absorbed through the skin.

Summary Analysis:

- NATIONAL: Heptachlor was not reported in 2000 or 2001. In 2002 through 2004, only relatively small quantities were reported.
- STATE/FACILITY: For 2002−2003, only one facility, located in New Jersey, reported relatively small quantities of heptachlor. In 2004, this facility and another facility located in Texas reported heptachlor. The quantities of heptachlor reported by both these facilities were initially generated offsite and brought onsite for treatment.
- MANAGEMENT: Approximately 99 percent of the heptachlor was treated (incinerated) onsite by the Texas facility; the New Jersey facility disposed of most of its heptachlor and also treated a small quantity in its onsite wastewater treatment plant.
- RECYCLING: No recycling of heptachlor was reported.

National Trends:

Exhibit 4.84 shows the number of facilities that reported heptachlor in 2000 to 2004 and the quantities that were managed via disposal, treatment, energy recovery, and recycling. In 2002 through 2004, only relatively small quantities were reported by up to two facilities. Since 2002, most of the heptachlor was treated, using incineration.

Exhibit 4.84. National Management Methods for Heptachlor

Management Methods for Heptachlor and Number of Facilities	2000 (pounds)	2001 (pounds)	2002 (pounds)	2003 (pounds)	2004 (pounds)	Percent Change (2002−2004)	Management Method − Percent of Quantity of This PC (2004)
Number of Facilities	0	0	1	1	2	100.0%	-
Disposal Quantity (pounds)	0	0	2	8	7	300.0%	0.9%
Energy Recovery Quantity (pounds)	0	0	0	0	0	NA	0.0%
Treatment Quantity (pounds)	0	0	12	46	768	6143.9%	99.1%
Priority Chemical Quantity (pounds)	0	0	14	54	775	5397.9%	-
Recycling Quantity (pounds)*	0	0	0	0	0	NA	-

*Note: Waste minimization is the emphasis of this Report. As such, we primarily focus on quantities of PCs that are managed via onsite/offsite disposal, treatment, or energy recovery because we believe these PC quantities offer the greatest opportunities for waste minimization. Because recycled quantities of PCs are already directed to their best uses, they are considered separate and distinct from the quantities of PCs not recycled. Throughout this section, the recycled quantity is presented for the purpose of providing some perspective regarding the quantity of this PC already recycled compared to the quantities that are managed via disposal, treatment, and energy recovery and thus potentially available for waste minimization.

EPA Regional Trends:

Exhibits 4.85 and 4.86 show the quantity of heptachlor in the two EPA regions where facilities reported this PC in 2002−2004. Heptachlor was not reported in 2000 or 2001. Heptachlor was reported by one facility in Region 2 in 2002−2004 and by one facility in Region 6 in 2004.

Exhibit 4.85. Regional Quantity of Heptachlor, 2002−2004

EPA Region	2002 (pounds)	2003 (pounds)	2004 (pounds)	Percent Change in Quantity (2002−2004)	Percent of Total Quantity of Heptachlor (2004)
2	14	54	9	−34.8%	1.2%
6	0	0	766	NA	98.8%
Total	**14**	**54**	**775**	**5397.9%**	**100.0%**

Exhibit 4.86. 2004 Distribution of Facilities Reporting Heptachlor and the Quantities of Heptachlor Reported, by EPA Region

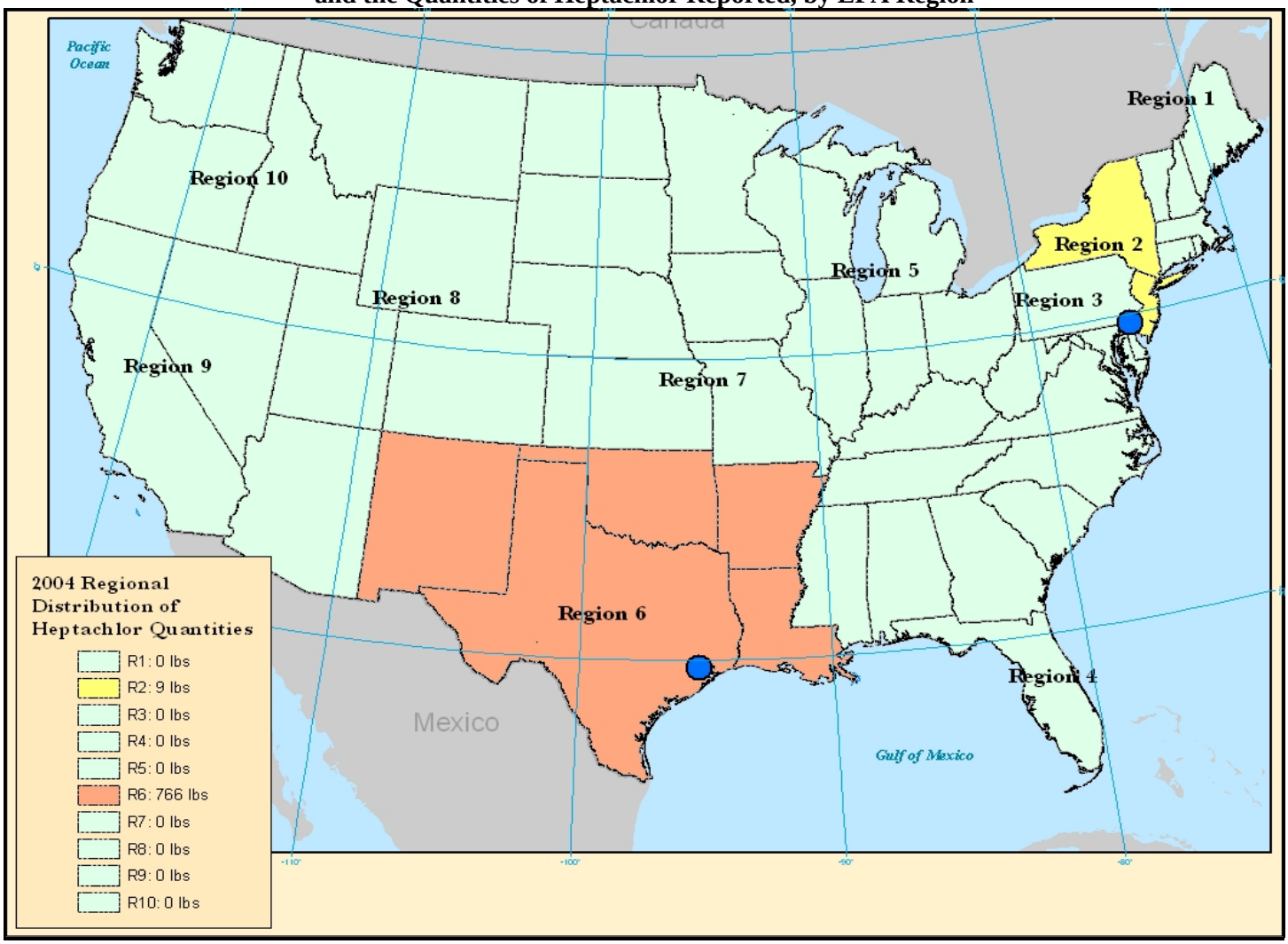


Exhibit 4.87 shows how heptachlor was managed by the two facilities (one facility in each of the regions) that reported this chemical in 2004. Approximately 99 percent of the heptachlor was treated (incinerated) onsite by the Region 6 facility; the Region 2 facility disposed most of their heptachlor and also treated a small quantity in its onsite wastewater treatment plant. No recycling of heptachlor was reported.

Exhibit 4.87. Regional Management Methods for Heptachlor, 2004

EPA Region	Quantity of Heptachlor (2004)	Percent of Heptachlor (2004)	Disposal (pounds)		Energy Recovery (pounds)		Treatment (pounds)		Recycling (pounds)	
			Onsite Disposal	Offsite Disposal	Onsite Energy Recovery	Offsite Energy Recovery	Onsite Treatment	Offsite Treatment	Onsite Recycling	Offsite Recycling
2	9	1.2%	7	0	0	0	2	0	0	0
6	766	98.8%	0	0	0	0	766	0	0	0

State Trends:

No facilities reported heptachlor in 2000 or 2001. Since 2002, relatively small quantities of heptachlor were reported by only two facilities: one facility in New Jersey and one facility in Texas (Exhibit 4.88). Only the New Jersey facility reported heptachlor in 2002 and 2003.

Exhibit 4.88. State Quantity Trends for Heptachlor, Based on 2004 Quantities, 2000−2004

State	Quantity of Heptachlor			Change in Quantity (2002−2004)	Percent Change in Quantity (2002−2004)	Percent of Total Quantity of This PC (2004)
	2002 (pounds)	2003 (pounds)	2004 (pounds)			
TX	0	0	766	766	NA	98.8%
NJ	14	54	9	−5	−34.8%	1.2%
Total	**14**	**54**	**775**	**761**	**5397.9%**	**100.0%**

Exhibits 4.89 and 4.90 show the trends for the quantities of heptachlor reported by facilities in these two states in 2004.

Exhibit 4.89. Trends in Heptachlor Quantities Reported in Texas, 2002−2004

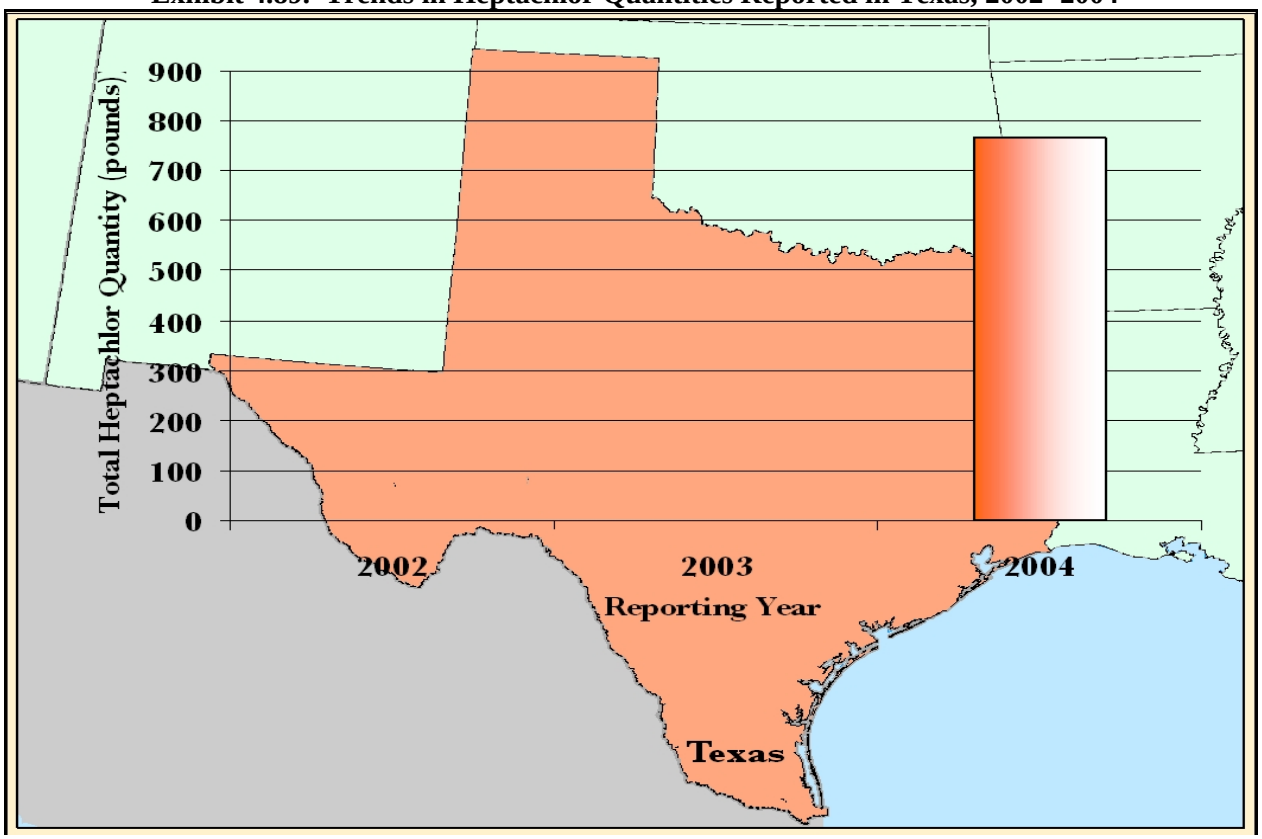
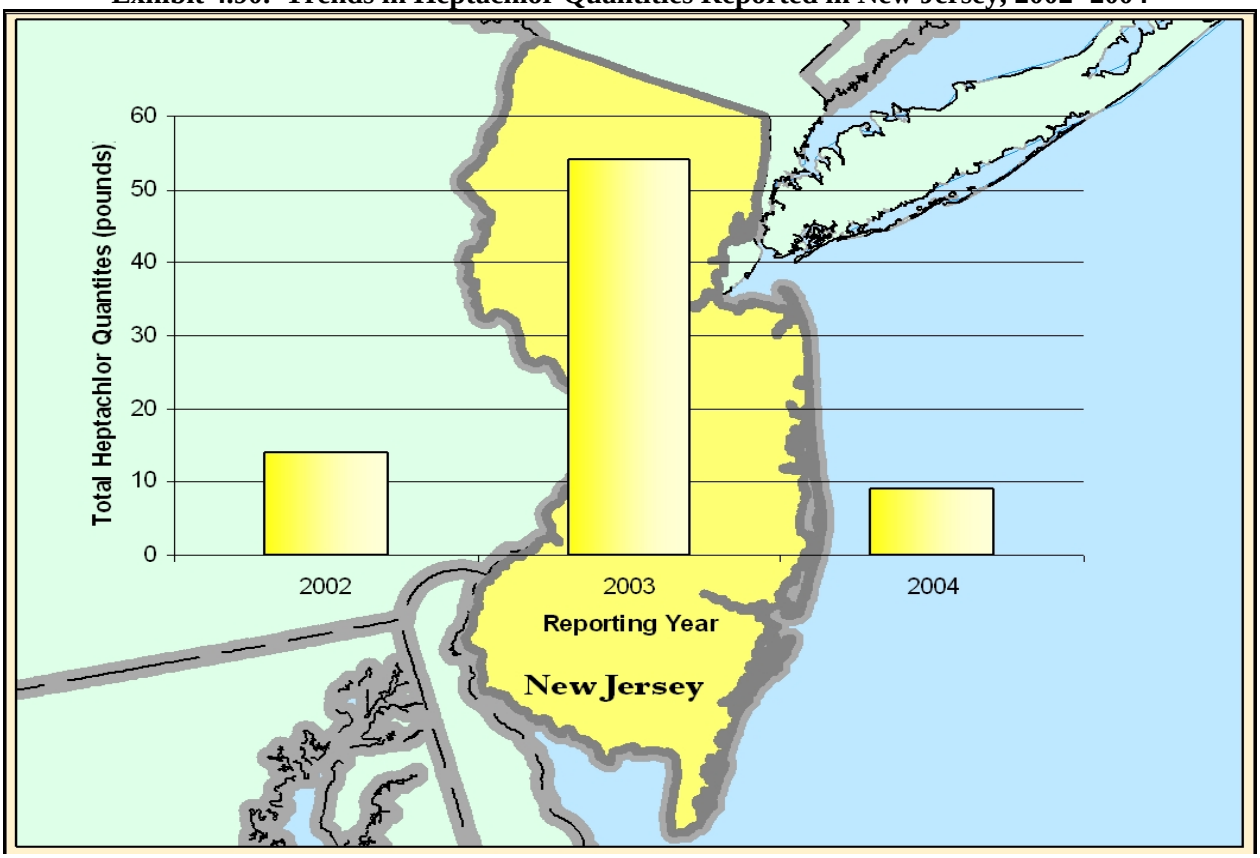


Exhibit 4.90. Trends in Heptachlor Quantities Reported in New Jersey, 2002−2004

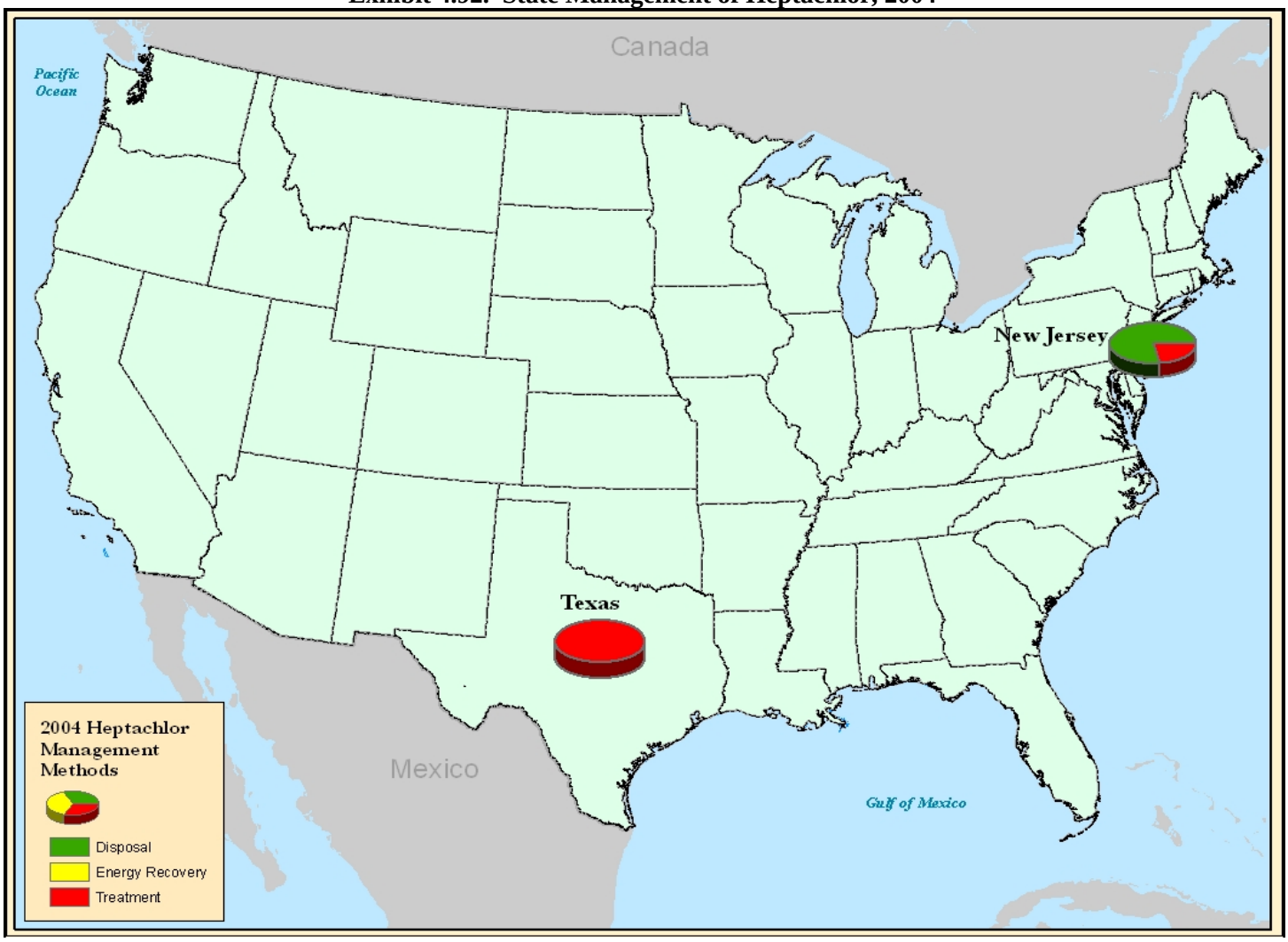


Exhibits 4.91 and 4.92 show how heptachlor was managed at the two facilities (one facility in each state) in 2004. Approximately 99 percent of the heptachlor was treated onsite. The New Jersey facility treated a portion of the heptachlor in its wastewater treatment plant; the Texas facility incinerated all of its heptachlor. Much of the heptachlor reported by the New Jersey facility was sent to offsite disposal. No recycling of heptachlor was reported in 2004.

Exhibit 4.91. State Management Methods for Heptachlor, 2004

State	Total Quantity of Heptachlor (2004)	Onsite Disposal (pounds)	Offsite Disposal (pounds)	Onsite Energy Recovery (pounds)	Offsite Energy Recovery (pounds)	Onsite Treatment (pounds)	Offsite Treatment (pounds)	Onsite Recycling (pounds)	Offsite Recycling (pounds)
NJ	9	7	0	0	0	2	0	0	0
TX	766	0	0	0	0	766	0	0	0

Exhibit 4.92. State Management of Heptachlor, 2004



Industry Sector (SIC) Trends:

Exhibit 4.93 shows the quantity of heptachlor reported by two facilities in 2002−2004. No facilities reported heptachlor in 2000 or 2001. One facility in SIC 2869 (Industrial organic chemicals, nec) reported relatively small quantities of heptachlor in each year since 2002. The quantity of heptachlor reported by this facility was based on an estimate of the concentration of this chemical in wastewaters generated from offsite sources. In contracts with individual offsite sources to treat wastewaters, the facility defined the maximum allowable concentration of heptachlor in the wastewater. This facility reported a different primary SIC code in 2004, using SIC 2865 (Cyclic crudes and intermediates). In 2004, a facility in SIC 2819 (Industrial inorganic chemicals) reported approximately 99 percent of the total quantity of heptachlor. The quantity of heptachlor reported by this facility was also initially generated offsite and brought onsite for incineration in the reporting facility's commercial industrial furnace. Heptachlor was not previously treated or reported by this facility prior to 2004; the 2004 quantity may have been a one time occurrence.

Exhibit 4.93. Industry Sectors Containing Heptachlor, 2002−2004

Primary SIC	SIC Description	Number of Facilities That Reported Heptachlor (2004)	2002 (pounds)	2003 (pounds)	2004 (pounds)	Change in Quantity (2002−2004)	Percent of Total Quantity of This PC (2004)
2819	Industrial inorganic chemicals, nec	1	0	0	766	NA	98.8%
2865	Cyclic crudes and intermediates	1	0	0	9	NA	1.2%
2869	Industrial organic chemicals, nec	0	14	54	0	−100.0%	0.0%
Note: The facility that reported SIC code 2869 as its primary SIC code in 2002−2003, reported SIC 2865 as its primary SIC code in 2004.							

Exhibit 4.94 shows how heptachlor was managed at the two facilities that reported this chemical in 2004. Approximately 99 percent of the heptachlor was treated onsite. The SIC 2819 facility incinerated all of its heptachlor. The SIC 2865 facility treated a portion of the heptachlor in its onsite wastewater treatment plant but sent most of its heptachlor to offsite land disposal. These facilities did not report any recycling of heptachlor in 2004.

Exhibit 4.94. Management Methods for Heptachlor in Industry Sector, 2004

Primary SIC	SIC Description	Total Quantity of Heptachlor (2004)	Percent of Total Quantity (2004)	Disposal (pounds)		Energy Recovery (pounds)		Treatment (pounds)		Recycling (pounds)	
				Onsite Disposal	Offsite Disposal	Onsite Energy Recovery	Offsite Energy Recovery	Onsite Treatment	Offsite Treatment	Onsite Recycling	Offsite Recycling
2819	Industrial inorganic chemicals, nec	766	98.8%	0	0	0	0	766	0	0	0
2865	Cyclic crudes and intermediates	9	1.2%	7	0	0	0	2	0	0	0
Note: The facility that reported SIC code 2865 as its primary SIC code in 2004, reported SIC 2869 as its primary SIC code in 2002−2003.											